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## How are Time-Dependent Childbearing Intentions Realized? Realization, Postponement, Abandonment, Bringing Forward

Les intentions de fécondité sont-elles réalisées dans le délai prévu ? Réalisation, report, abandon, avancement

Zsolt Spéder · Balázs Kapitány

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**Abstract** Our study aims to identify factors that facilitate or inhibit the realization of fertility intentions. The analysis uses data collected in the first two waves of a Hungarian longitudinal survey. Fertility intentions recorded at the first wave pertain to the subsequent 3-year period, just similar to the behavior variable measuring the realization of intentions, i.e., a birth within the 3-year period in question. For this analysis, we used the respondents' demographic, socio-structural, and orientational traits recorded at the first interview. Our findings show that age, parity, and partnership play a determining role in the realization of fertility intentions, but employment status, religious affiliation, and overall life satisfaction all exhibit significant effects. A marked gender difference was detected not only with regard to employment status but in the area of values and orientations as well.

**Keywords** Fertility intentions · Fertility behavior · Fertility dynamics · Postponement · Panel survey · Generation and gender survey · Hungary

**Résumé** L'objectif de notre étude est d'identifier les facteurs qui facilitent ou inhibent la réalisation des intentions de fécondité. L'analyse s'appuie sur les deux premières vagues d'une enquête longitudinale menée en Hongrie. Les intentions de fécondité recueillies dans le cadre de la première vague concernent la période des trois années à venir, de la même façon que la variable de comportement mesurant la réalisation des intentions, à savoir, une naissance survenue au cours de cette même période. Les caractéristiques démographiques et socio-structurelles, de même que certaines dispositions personnelles recueillies lors du premier entretien ont été utilisées dans l'analyse. Nos résultats indiquent qu'à la fois l'âge, la parité, et la

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situation de couple jouent un rôle capital dans la réalisation des intentions et aussi que la situation d'emploi, l'appartenance religieuse et le niveau de satisfaction par rapport à la vie exercent une influence significative. Une différence prononcée entre hommes et femmes est mise en évidence en matière de situation d'emploi et également dans le domaine des valeurs et des dispositions personnelles.

**Mots-clés** Intentions de fécondité · Comportement procréatif · Dynamique de fécondité · Report · Enquête par panel · Enquête Générations et Genre · Hongrie

## 1 Introduction

The discrepancy between childbearing intentions and actual behavior has been a central issue in fertility research for decades. Fertility surveys inevitably inquire about the respondents' intentions to have (a/nother) child—and if so, how many more—and they invariably ask people whose reproductive lifespan was over if the number of children they have corresponds to their previous intentions. Needless to say, research can have a wide variety of motivations: sometimes estimates for the expected number of children are required for population projections (Westoff and Ryder 1977), sometimes the issue is whether the new types or methods of data collection facilitate new kinds of analyses (Thomson 1997; Schoen et al. 1999; Quesnel-Vallée and Morgan 2003), and sometimes, the gap between intentions and behavior carries relevant policy information (Goldstein et al. 2003), and so forth.

The persistently low level of fertility in Europe constitutes a stimulating environment for research on whether this tendency is simultaneous with a decline in childbearing intentions and on the correlations between the two processes on both the societal and the individual level. Postponement, which generally characterizes fertility development in Europe today, obviously results in a marked difference between the average intended family size and the period total fertility rate. This is especially true in the case of the former state socialist countries where the decline in fertility is similar to that of Western Europe in its directionality but exceed that in its pace (Sobotka 2008). While TFR in this region had been the lowest in Europe for a number of years, the figure for the intended (or ideal) number of children exceeded two in the majority of these countries (Goldstein et al. 2003; Spéder 2006).

In the age of postponement, research into fertility intentions must proceed with caution: on the one hand, a wide gap between the average intended number of children and the total fertility rate is highly predictable. On the other hand, the mechanism of postponement may suggest that the final number of children will eventually approach the intended number of children in the various cohorts. It seems obvious that those planning to have children will realize their childbearing intentions at an increasingly later period in life, and that the question whether or not postponers will actually reach the originally intended number of children can only be studied after the end of their reproductive span.

In the time of fertility postponement, the study of time-dependent fertility intentions is highly justifiable, though research questions must be formulated in a way to suit the particular situation: Have people who planned to have children within 1/2/3 years succeeded in realizing their intentions within the specified time period? Have those who failed to realize their plans within their particular period of time abandoned them altogether or do they still maintain their childbearing intentions? Can we identify the factors that facilitate or hinder the realization of time-dependent fertility intentions?

Only longitudinal panel research will enable us to answer such kind of questions, to study the timely realizations of intentions, and to search for factors that influence intention realization. This study will use the first two waves of data collection “*Turning Points of the Life Course*”, the Hungarian survey carried out in the framework of the European GGP program. We will look at the factors facilitating or inhibiting the realization of childbearing intentions between the two waves of data collections.

We hope this research will contribute to fertility decision-making research, and the analysis will lead to a greater understanding of the relationship between intention and behavior, and the mechanisms explaining the gap between the two.

We will proceed via the following steps: first we review the most important approaches and empirical studies that might assist our inquiry, taking care to locate our time-dependent intention approaches within the literature on fertility intentions. Then, we present the data, the methods, and the variables we used. We then present our findings in three stages: first we study the impact of demographic factors, second, we include social and ideational factors in the model, and third, we perform the analysis separately for both genders. We terminate this article with a short conclusion.

## 2 Review of the Relevant Theoretical Approaches

### 2.1 The Conceptualization and Measurement of Fertility Intentions

Opinions in the literature differ regarding the predictive value and strength of influence of intentions on fertility behavior. Critical approaches stress that intentions alone have no or hardly any determinative role on fertility behaviors; they are more properly seen as mediators (Westoff and Ryder 1977; Toulemon and Testa 2005). Findings that indicate a high share of over- and underachievement of fertility intentions (Quesnel-Vallée and Morgan 2003), or of the instability of intentions may also be construed as indirect support for the negligible or minor role of intentions. Other studies, however, reach a contrary conclusion: the explanatory power of intentions is exceptionally high, and intentions are independent, not merely the mediating factors of fertility behavior (Schoen et al. 1999; Berrington 2004). It is difficult to formulate an indisputable position on the role of intentions in fertility processes, especially as the statements above refer to different kinds of intentions—not to mention that they measure intentions differently. The literature reviewed by us posits at least five different concepts of intentions: (1) *intended*

(expected) *family size*,<sup>1</sup> (2) *intention* to have (any more) children *at all*, (3) the intention of having a(nother) child *within a given time period*, (4) the *degree of certainty* of the childbearing intention, and (5) whether *the intentions of the partners* coincide.

The longitudinal study of the relationship between intended family size and observed fertility clearly indicates that (individual) completed fertility involves a considerable underrealization as well as overrealization of the intentions (Quesnel-Vallée and Morgan 2003). Reports from France (Monier 1989) and Hungary (Kamarás and Szukics Serfőző 2003) also documented overestimations of future family size (underrealization of intentions). Liefbroer, who discusses this question in detail reports not only downward (and upward) adjustment of family size intention but also identifies factors and mechanisms—such as changes in partnership and activity status, fertility events and aging—which contribute to changes in individual family size intentions (Liefbroer 2008).

Contrary conclusions are arrived at in studies of the intention to have (any more) children *at all* (Westoff and Ryder 1977; Schoen et al. 1999; Berrington 2004). While the study by Westoff and Ryder raises fundamental doubts about the independent influence of intentions, they are quite manifest in that of Berrington. Furthermore, Schoen et al. explicitly advocate the additional predictive power of intentions: “Intentions to have or not to have a child or another child and the certainty of those intentions for future childbearing are strongly and consistently related to future fertility behavior” (Schoen et al. 1999, p. 798).

There is no consensus concerning the effects of *time-dependent intentions* that are central for our study. According to Schoen et al., if the intention is for the “foreseeable future” (in their case, within 4 years), then it has a significant impact on fertility behavior. This position is shared by Rindfuss et al. (1988). On the contrary, Westoff and Ryder had found that intentions for the subsequent 2-year period are not highly predictive for the realizations within that 2-year period but are indicative of the likelihood of childbearing in the far future. Toulemon and Testa arrive at a similar negative conclusion, namely that “...the relationship between fertility intentions and actual fertility behaviour is quite loose, because it depends on many other factors” (Toulemon and Testa 2005, p. 4), possibly because they found a high rate (58.5%) of uncertainty among their respondents. In a US research on time-dependent intentions, the majority (70%) of respondents retrospectively said that their underrealization resulted from a change of intention due to various factors (Westoff and Ryder 1977, p. 433).

There is a clear consensus about the effect of the *certainty* of intentions. All previous research investigations have underscored that certainty of intentions contribute to predicting the next childbearing to a great content (Westoff and Ryder 1977; Schoen et al. 1999; Philipov and Testa 2007).

Studies examining the opinion of *partners* are mostly in agreement when they conclude that the intention of the partner is (also) important. If there is no agreement

<sup>1</sup> Since we will not explore empirically intentions of family size (number of children), we do not discuss overlaps and differences of such concepts as “ideal number of children,” “personally desired” number of children, or “how many more children are you planning to have,” and so on.

**Table 1** Pattern of realization of time-dependent intentions and revisions of intentions in the Hungarian GGS survey

Intended to have a child within 3 years at wave I	Had a birth between waves	Intended to have a child at all at wave II	Sample size ( <i>n</i> )	Realization and change of intentions
Yes	Yes		444	Intentional parents
Yes	No	Yes	763	Postponers
Yes	No	No	264	Abandoners
No	Yes		187	'Sooner/ Unintended' births
No	No		2,813	Consistently opposed

of intentions between the partners, then it is less likely that the respondent will realize his/her fertility intention (Thomson 1977; Schoen et al. 1999; Philipov and Testa 2007).

After this short review of the literature on fertility intentions per se and before discussing the factors that are likely to influence the discrepancy between intentions and behavior, we should narrow down the scope of our research. The simplest way to do this would be by precisely specifying the dependent variable of the analysis thus creating the variable by which we can measure the coincidence of or discrepancy between intention and behavior.

Our dependent variable is created by using three questions from the survey (see Table 1), namely, whether the respondent intended to have a(nother) child within 3 years at the time of the first wave, whether a child was born between the two waves, and whether the respondent intended to have a(nother) child at all, at the time of the second wave. Since, we aim to find out what factors are responsible for the success or failure of the realization of childbearing intentions measured at the first wave, we need to compare those who succeeded (*intentional parents*) to those who failed in realizing their intentions (Table 1). The division of this last group into two subgroups, to those who maintain their childbearing intentions (*postponers*) and to those who have abandoned them (*abandoners*)—will reveal more about the reasons of failure.<sup>2</sup> In order to be able to better identify the factors inhibiting the realization of positive intentions, we need to take into consideration the births that were not intended for the investigated 3-year period (*sooner-than-intended births*) and those who did not intend to get a child and succeed in realizing this intention (*consistently opposed*).

## 2.2 Factors Influencing the Realization of Intentions

### 2.2.1 Demographic Factors

**2.2.1.1 Age** As people age, the time left for childbearing continuously decreases. While the biological limits of childbearing, especially in the case of males, are not

<sup>2</sup> This division will also offer an insight into the individual process of postponement, even if this is not the primary concern of this article.

yet known, there are social limits for having children for both men and women (Settersten and Hagestad 1996). Those advancing in age are sensitive to the biological clock (Mynarska 2007), and this can safely be assumed to influence not only motivations but childbearing behavior as well. Consequently, we may assume that as one advances in age, the chances of realizing childbearing intentions increase. Heaton et al., on the contrary, found a positive relationship between the advancement of age and the chances of switching to childlessness. We assume the reasons behind this finding to be the decline of biological fertility and the persistence of life goals competing with raising a child. The longer the childless period is, the deeper this kind of lifestyle becomes ingrained and the more difficult it becomes to break with and to have a child. Thus, there is a direct correlation between the advancement of age and the chance of failing to realize childbearing intentions. Berrington (2004) studying childless people between the ages of 30 and 39, also concluded that the advancement of age decreases the chance of successfully realizing childbearing intentions.

**2.2.1.2 Parity** It is difficult to review demographic literature when it comes to formulating the possible effects of parity. In order to grossly oversimplify, the sharpest difference in behavior is between entry into parenthood (Parity0) and further childbearing (Hobcraft and Kiernan 1995; Hoem and Hoem 1989). It is among the childless that we can expect to find the highest rate of postponement and the lowest rate of successful realization of childbearing intentions, since this group exhibits the widest array of alternative life goals competing with childbearing (Barber 2001). Furthermore, the findings by Quesnel-Vallée and Morgan (2003)—that those intending to have two children have the best chance of realizing their intentions and that those planning to have no child or one child often end up having more, while those intending to have three or more often end up having less—seem to indicate that people with two or more children may have a lower chance of realization than those having none or only one child. In accordance with this, unintended or sooner-than-intended births will be most likely to be found among those with one or no child. At the same time, Berrington (2004) found that in a given 6-year period, those with no child or one child had the highest likelihood of realizing their (further) childbearing intentions.

**2.2.1.3 Partnership** Fertility studies usually assume that a partnership is a prerequisite to childbearing and, by extension, to the realization of childbearing intentions. This is true even if the existence or non-existence of a partnership has a direct impact on intention formation as well (Philipov et al. 2006). Consequently, we also anticipate that those in partnerships will have a better chance of realizing their childbearing intentions. It is a more intriguing question whether the form of partnership (marriage or cohabitation) has any effect on the realization of intentions. It seems that in some countries, such as France, where cohabitation is widespread, this form of partnership has but a modest effect on the chances of childbearing (Toulemon and Testa, 2005). Conversely, in the United States, cohabiting couples are less likely to realize their intentions (Heaton et al. 1999). According to the

authors, marriage signifies a stronger bond and a more lasting commitment in the United States (cf. Waite and Gallagher 2000). We agree with the authors who pointed out that the meaning of cohabitation differs from country to country (Heuveline and Timberlake 2004), which is directly related to the prevalence of cohabitation within the countries as well. Hungary is an interesting case from this perspective, since cohabitation as a form of partnership is rather widespread, still, it is mainly regarded as a premarital partnership form. Our assumption is that those cohabiting are less committed to each other; therefore, the rate of realization of intentions will be lower among them.

### 2.2.2 Social Factors: Education and Employment

It is difficult to assess the role played by social factors, not the least because one may encounter a number of contradictory findings on the issue (e.g., Heaton et al. 1999; Kreyenfeld 2001). Instead of briefly reviewing the relevant literature, we confine ourselves to present those assumptions that we will examine in detail during the course of our analysis.

Given that the number of people who are unemployed or on parental leave is rather low and that part-time employment in Hungary is relatively negligible, we will describe the labor market status of respondent using the dichotomous variable *employed/non-employed*. According to previous research, the effect of employment is ambivalent, especially as far as *women* are concerned (cf. Kreyenfeld 2001). There are two simultaneous influences at work here: the effect of opportunity cost and the income effect. In the particular case of Hungary, we need to point out that while specific wage-related family support measures aim to offset the opportunity costs of families with average incomes, the non-employed have a universal entitlement for a flat-rate, monthly support payment of considerable value for 3 years after childbirth.<sup>3</sup>

According to research findings on the realization of intentions, the mechanisms at play suggest that the income effect is most likely to be at work.<sup>4</sup> Berrington (2004) showed that among childless women, those with a higher income are more likely to give birth, whereas Adsera (2005) pointed out that the unemployed are prevented from realizing their childbearing intentions. The universal and in many ways quite generous family support programs in Hungary may constitute an incentive also for people without income to realize their intentions.

As for men, research findings are less ambivalent, and in most cases they demonstrate the income effect at work (Ermish 2002). We assume, that among men, those employed will be the most likely to realize their childbearing plans.

Education can simultaneously indicate economic and cultural effect mechanisms. There is a strong correlation between education and income levels, so the mechanisms discussed above could very well work for the education effect as well (cf. Quesnel-Vallée and Morgan 2003). There is a variety of lifestyles and cultural

<sup>3</sup> About family support schemes and their relationship to fertility in Hungary, see Spéder and Kamarás (2008, especially Sect. 7).

<sup>4</sup> Perhaps opportunity costs have a stronger effect on the formulation of intentions.



resources that are tied up with education.<sup>5</sup> From our particular perspective, it is important that people with a higher level of education are generally more informed and knowledgeable—by virtue of which, we can assume that intended parenthood will be the most pervasive among them while unintended or sooner-than-intended births will be more likely to be found among the least educated.

### 2.2.3 Ideational Factors

We agree with those authors who posit that beyond demographic factors and socio-economic environments, a determining and independent role is played by values and orientations (Lesthaeghe 1995; Moors 2002; Liefbroer 2005). Before turning to the possible factors, we should be conscious that our dependent variable is a subjective one per se, because it contains the *intention* to have or not to have a(nother) birth within 3 years. On the strength of the Theory of Planned Behavior, elaborated by Ajzen, we have good reason to believe that the intention variable mediates attitudes, ideas, and expectations closely associated with childbearing (Ajzen 1988). Therefore we assume to find additional effects whether the ideational variables are *not closely linked to childbearing but attempt to capture a general orientation* (norms and values). In her analysis, Berrington used a gender role–gender attitude scale, and Heaton and colleagues employed a personal and familial motivation scale (Heaton et al. 1999; Berrington 2004). We decided to include in the analysis two dimensions aimed at capturing the general state of value orientations and subjective evaluations.

**2.2.3.1 Religious Affiliation** The issue of the effect of religious affiliation on fertility behavior has a curious history in demographic literature. While an impressive number of demographic analyses treated the issue in the United States (cf. the reviews of Lehrer 2004; McQuillan 2004), European demographic research has been dominated by the view that in our increasingly secular societies, religious affiliation has lost its bearing on demographic behavior. Moreover, since certain denominations have a monopoly of faith in European societies, analyses of the issue ignore religious affiliation as such in favor of church attendance; in other words, they look at the fertility of the practicing minorities within the specific denominations (Adsera 2006).

Analyses performed in multi-denominational countries (such as Germany) in many cases indicate a relationship between certain demographic behavior and denominational affiliation (Müller 2000; Eckhard and Klein 2006), but comprehensive, international analyses are hardly available. Philipov and Berghammer (2007) analyzed the data collected under the Fertility and Family Survey in 18 European countries. Of these countries, Germany, Latvia, Hungary, and Switzerland can be regarded as multi-denominational. In all four countries, people are either Roman Catholic or Protestant (or Greek Orthodox in Latvia). In this analysis,

<sup>5</sup> For instance, employment motivations differ as well: among those with a higher level of education, career perspectives dominate, while those with a lower level of education are more concerned with making a living.

findings pertaining to different fertility intentions and preferences<sup>6</sup> present a mixed picture. For instance, in Latvia, the ideal number of children for Protestants was higher than for Catholics—in Switzerland, it was the other way around, while no difference between the two was found in Hungary and Germany. Generally speaking, data pertaining to Catholics, Protestants, and people with no religious affiliation showed no significant differences.

Besides this surprising result, there are a number of arguments for including religious affiliation in the analysis in our case. Firstly, the processes of secularization are less advanced in Hungary than in many Western European countries, and in the wake of the collapse of state socialism, a sort of Christian renewal took place (Tomka and Zulehner 1999, 2000). Secondly, there is a great number of both Catholics and Protestants in Hungary—the two denominations have been historically characterized by dissimilar fertility behavior (Andorka 1971). Moreover, the analysis of the 2001 census data indicates that, there are differences between the two biggest religious denominations in terms of completed fertility to this day. The fertility of Catholics somewhat exceeds that of the Calvinists and exceeds that of people with no religion to an even greater degree (Tárkányi 2006). On the basis of these results, differences between people belonging to different denominations or no church at all can be expected.

*2.2.3.2 Subjective Perception of Life: Evaluation of Past Development and Future Outlook* Very few attempts have been made to determine whether people's satisfaction with the past development and/or their future outlook exercise any effect on their childbearing behavior, although the idea is not unknown to demographic research. In his influential book Easterlin discussed extensively the role of evaluation of past development and future outlook in shaping fertility behavior of different cohorts (Easterlin 1987). There is no space to review the relevant literature on subjective well-being (see Diener 2000), but from the point of our approach we wanted to highlight, that the concepts of subjective well-being “refers to people's multidimensional evaluations of their lives, including cognitive judgments of life satisfactions as well as affective evaluations of moods and emotions” (Eid and Diener 2003, p. 245). This evaluative and attitudinal element of subjective well-being stimulated us to include overall life satisfaction into the ideational factors.

Some former research showed the usefulness of including satisfaction into the analyses. It is documented that satisfaction with marriage or the lack of divorce expectations has a positive effect on the likelihood of future childbearing (Myers 1997; Heaton et al. 1999). Perelli-Harris (2006) looked at longitudinal data from Russia to analyze the effect of subjective well-being<sup>7</sup> on the prospects of having more children among married women with children. According to the findings, there

<sup>6</sup> Ideal number of children; expected number of children (childless women); intention to have a second child; intention to have a third child; actual number of children.

<sup>7</sup> The analysis used satisfaction with the present as well as future expectations. The following questions were used: “Do you think in the next 12 months you and your family will live better than today or worse?”; and “To what extent are you satisfied with your life in general at the present time?”.

is a positive correlation between subjective well-being and childbearing intentions in the future, and in the case of women, a greater degree of subjective well-being had a greater chance to result in actual childbearing (see also Philipov and Testa 2007). Bhaumik and Nugent (2002) used the East German data subset collected under the German GSOEP in 1992 and 1996 as a cross section and showed that the increase in private anxiety associated with the economic situation could explain the decline in fertility and the postponement of childbearing at the time of the 1992 data collection. Contrary to this, having analyzed the same data, Kreyenfeld (2005) found that postponed childbearing among childless German women shows no correlation with general satisfaction with life in multi-variate analyses. Kreyenfeld found no significant differences at any other education level. Previous findings of ours (Spéder and Kapitány 2007) seem to indicate that an optimistic future outlook (*How much are you satisfied with your future prospects?*) increases the chances of having children, especially among men and especially for the second or further child(ren). In this analysis, we will measure the effect of overall life satisfaction incorporating past developments, current situation, and future outlook.

#### 2.2.4 Gendered Analyses

Whilst the majority of analyses focus on the fertility behavior of women, it seems superfluous to argue that we should discuss the intentions and behavior mechanisms of men as well. We assume that significant factors do not always function the same way for men as they do for women. This assumption should be borne out especially when it comes to socio-economic factors (education, employment) but we should not discount the possibility that ideational factors will also produce different results. In fact, the different limits of biological fertility for men and women open the way for alternative mechanisms of behavior when it comes to the age factor.

### 3 Data, Method

#### 3.1 Data and Sample

Data from two waves of the Hungarian panel survey “Turning Points of the Life Course”<sup>8</sup> was used. The survey-program was elaborated in close cooperation with the European “Generation and Gender Program (GGP)” (cf. Vikat et al. 2007). Its concept and design is the same but the first wave questionnaire differs from the GGS core questionnaire. The first wave of data collection in the Hungarian panel survey was carried out between November 2001 and March 2002. Fieldwork for the second wave was conducted between November 2004 and July 2005. 85.4% of the first wave surviving respondents could be re-interviewed for the second wave. The sample was representative for gender, type of settlement, and people aged 18–75 in 2001/2002. The initial sample size was 16,364. In this analysis, we used the subsample of men and women aged 18–39 years in 2001–2002 who in 2001

<sup>8</sup> For more details of the concept and design, see Spéder (2001).

provided valid responses to questions about future childbearing intentions and its timing, and did not drop out of the sample by 2004–2005. This resulted in a useful sample size of 4,471.<sup>9</sup>

### 3.2 Dependent Variable

We used two questions to determine the timing of the intention of the respondent at the time of the first wave: (1) Would you like to have any (more) children?, if yes, (2) At what age would you like your (next) baby to be born? 33% of the sample intended to have a child within the next 3 years. 30.2% of these did actually have a child by the time of the second wave (cf. Table 1).<sup>10</sup> This constitutes 70.4% of all births between the two waves. Two-thirds of the other births took place sooner than intended while the remaining births were not intended in 2001.<sup>11</sup> We created the dependent variable on the basis of the data above. Those who intended to have a child within 3 years and successfully realized this intention were called “*intentional parents*.” Those births that were not intended to take place in the time period under investigation were called “*sooner(-than-intended)/unintended*”. Those who did not intend and had no children<sup>12</sup> we called “*consistently opposed*.” We divided those people who intended to have children within 3 years but failed for some reason into two groups: one group for those who maintained their intention to have children at the second wave whom we called “*postponers*”, and another group who abandoned their plans, called “*abandoners*.” These distinctions provide us with an opportunity to understand the reasons for unsuccessful realization and allow us a glimpse into the mechanism of postponement. Since we have five outcomes of intention–behavior relations, many different dyadic comparisons could be made. Although intentional non-parents (“*consistently opposed*”) also realized successfully their intention, in our research we concentrate on success and failure of those respondents who intended to have a child within the 3 years time window.

### 3.3 Method

We employed multinomial regression in our analysis. This method was used by Heaton et al. (1999) and Berrington (2004) to study the relationship between fertility intentions and behavior of childless people. Because our research question is aimed at exploring the gap between intentions and behavior and at understanding

<sup>9</sup> Originally, 5,569 people belonged to this group, but we excluded those who were pregnant at the time of the first wave, men whose partner was pregnant at the time or those who said they could not have any more children. We also excluded those who responded with an “I don’t know” when asked about the timing of the birth of a next child. All excluded cases,  $n = 818$ .

<sup>10</sup> We excluded those who in 2004–2005 said they (or their partners) were pregnant at the time of the data collection.

<sup>11</sup> Of course we were not able to measure any changes in intentions between the two waves.

<sup>12</sup> We must note that 8% of this group switched to wanting a child in 2004–2005 (5.4% switched to wanting a child within 3 years) but we are not concerned with this type of intention change in this study as it is irrelevant from the point of view of our research aim.

failures of realizing positive intentions, we used the *intentional parents* as a reference group.

### 3.4 Independent Variables

There is no need to describe at length all of the independent variables as they are self-evident from the discussion in the preceding chapter and from the descriptive statistics in the Appendix (Table 5). Here, we only need to point out that age (number of years) and education (number of completed years), and the *overall life satisfaction* are continuous variables. For the creation of the latter, we used a scale composed of four items, which measured (1) satisfaction with life developments so far, (2) satisfaction with future outlook as well as self-assessment with regard to (3) present living conditions, and (4) future living conditions.<sup>13</sup> The four items are in strong correlation and are suitable for index creation. The value of Cronbach's Alpha is 0.85. In the case of *religious affiliation*, we used Catholics as the reference group (52% of the respondents), and we also included Calvinists, other denominations, and non-religious people in the model.

## 4 Results

### 4.1 Demographic Factors

Demographic characteristics are confident predictors of the before mentioned types of intention–behavior relationships (cf. Table 2). Those who failed to realize their intentions within 3 years—regardless of the changes in their intentions—are clearly older than those who succeeded. However, those who had sooner-than-intended or unintended children, appear to be younger.

In all the cases, the effect of the number of children appears to be significant, and the effect mechanism seems to be linear. There is, however, a significant difference between postponers and abandoners. If we compare those who abandon their childbearing intentions to those who realize them, it emerges that people with one (and especially more) child(ren) are significantly more likely to abandon their plans. Conversely, people who postpone their intentions are more likely to have one child or none at all. Finally, people who already have children—especially two or more—are more likely to be found among those who had a sooner-than-intended/unintended childbirth than among those who realized their birth intentions for a given period of time.

Partnership status exhibits a clear relationship with the various types of fertility intentions/behaviors. As was expected, there is a higher proportion of single noncohabitants among those who failed to realize their intention than among those who successfully realized their plans. Single noncohabitants also have a

<sup>13</sup> “How far are you satisfied with the course of your life so far?”—“How far are you satisfied with your future prospects?”—“How would you rate your present living conditions?”—“What do you expect your living conditions will be in five years’ time?”.

**Table 2** Multinomial regression predicting patterns of realization of time-dependent intentions and intention revision

	Postponers <sup>a</sup>	Abandoners	Sooner/unintended births	Consistently opponents
Age	1.120***	1.140***	.919***	1.013
Male	.725**	.860	.860	.873
Parity 1	.596***	4.566***	3.403***	2.522***
Parity 2+	.295***	8.835***	14.544***	21.737***
Cohabitor at wave 1	1.441**	2.010***	1.991***	1.620***
Alone at wave 1	5.650***	9.858***	3.887***	21.725***
Chi-square:	1,347***			
Df	20			
Nagelk. $R^2$	.20			
<i>n</i> :	4,471			

<sup>a</sup> The comparison group is the *intentional parents*

\*  $p < .01$ ; \*\*  $p < .05$ ; \*\*\*  $p < .001$

significantly higher probability to have unintended than intended births. A partnership is a prerequisite for fertility plans to be realized on time (Schoen et al. 1999; Philipov and Testa 2007).

A more intriguing issue, however, is whether there is a difference in the success rate of realizing their fertility plans between cohabitants and married couples. When compared to married people, cohabitants have a significantly higher chance to be in any of the other intention-behavior groups than the group of intentional parents. In other words, cohabitants have less chance to fully realize their positive fertility intentions than those legally married. This seems to indicate that cohabiting constitutes a lower level of commitment than legal marriage in Hungary. (However, at the same time, cohabitants have a higher chance to realize their negative fertility intentions than married people.)

Until the last model, we used gender as a control variable, and thus made no comment on the related results—we will detail the gender-specific findings in the last step of the analysis.

## 4.2 Socio-Economic Situation, Orientations

In the second stage, we included socio-economic and ideational factors in the analysis (Table 3). Two aspect/motives justify for the separate treatment of these variables. On the one hand, we wanted to test whether the goodness of the model clearly increases after introducing these variables. On the other hand, we also wanted to check whether the extent and strength of demographic factors remain the same or change. Let us first discuss the significance of the new variables.

Structural factors produced a significant effect in two ways. Taking all other factors into account, the higher the attainment of one's level of education, the higher the chances to realize one's fertility intentions. In other words, fertility plans are

**Table 3** Multinomial regression predicting patterns of realization of time-dependent intentions and intention revision

	Postponers <sup>a</sup>	Abandoners	Sooner/unintended births	Consistently opponents
<i>Model 3</i>				
Age	1.130***	1.153***	.926***	1.038***
Male	.725**	.806	.860	.881
Parity 1	.573***	3.874***	2.946***	2.162***
Parity 2+	.275***	7.150***	11.925***	16.813***
Cohabitor at wave I	1.399*	1.696**	1.713**	1.419**
Alone at wave I	5.546***	8.073***	3.179***	18.388***
Job	.997	.783	.596**	.527***
Education	.967	.916**	.979	.922***
Calvinist	1.443**	1.014	.998	1.134
Other religion	.894	.735	.815	.932
No religion	1.361*	1.476*	1.027	1.468**
Overall life satisfaction	.997	.912*	.842***	.958
Chi-square:	1,457***			
Df	48			
Nagelk. $R^2$	.31			
n:	4,471			

<sup>a</sup> The comparison group is the *intentional parents*

\*  $p < .01$ ; \*\*  $p < .05$ ; \*\*\*  $p < .001$

more likely to be abandoned by people with lower education level. Those who have a job are more likely to have intended (as opposed to unintended) births. Conversely, those without a job exhibit a higher likelihood of sooner/unintended births.<sup>14</sup>

Ideational factors proved to be significant predictors. Non-religious people demonstrated a higher probability among both postponers and intention abandoners. The relationship is significant at a level lower than usual, and it is a question whether it persists in gendered analyses as well. Calvinists are more likely to become postponers than Catholics. That is to say, there is a measurable difference between Catholics and Calvinists in terms of the relation between realizing and postponing fertility intentions. The “overall life satisfaction” proves to be significant in two relations. A comparison between intentional parents and abandoners shows that satisfied people are more likely to realize their intentions than to abandon them. The significance level is lower than usual, so this relationship needs further refinement. The other effect is stronger: those who do realize their plans sooner than intended or

<sup>14</sup> Our analysis is not well suited to determine whether this is so, because jobless people get a job, and therefore bring forward fertility plans or because jobless people have children against their intentions—or perhaps because both scenarios are at work.

have an unintended birth are more pessimistic about their outlook than those who realize their intentions as planned.

Concerning the goodness of the model (Nagelkerke  $R^2$ ), we can prove that it increased significantly. This indicates that social–structural environment and ideational (subjective) features contribute clearly to understanding the realization and non-realization of fertility intentions. Since the extent and strength of demographic factors during this modeling step hardly changed, we assume that structural and ideational factors possess different natures as demographic ones. Therefore, we should rather treat them to be complementary than substituting.

### 4.3 Gender Differences

As the last step, we will look at the above-analyzed factors separately for men and women (Table 4). When mentioning relevant considerations, we indicated that we anticipated finding gender-specific effects. This assumption was reinforced by the fact that in earlier stages of the analysis; gender as a control variable showed significant effects in our models. In order to avoid repetition, we only discuss those findings where we found a difference according to gender.

Analyses separately performed for each gender clearly show that certain factors have a stronger influence on men than on women. Of the demographic factors, the effect of partnership status deserves attention: on the one side *partnership as such* (being not alone) has an all-pervasive influence in the cases of both genders, but seems to be more significant among male. On the other side, we found that partnership type—cohabitation or legal marriage—is especially important for women. Of the women who intended to have child(ren) over the next 3 years, married ones were more likely have births as intended while *cohabitants were more likely to postpone childbearing*. Childbirth to a married couple was more likely to be intended while childbirth to cohabitants was more likely to be unintended or sooner-than-intended. The type of partnership—the degree of its institutionality—has a clear effect on the fulfillment of fertility intentions among women.

Structural factors seemed to have a stronger impact among men. Employed men were more likely to realize their fertility plans than jobless men. This relationship is especially true with regard to the relationship between *abandoners versus intentional parents* and *intentional parents versus sooner-than-intended parents*. Those without a job have a higher chance of abandoning their fertility intentions or having an earlier/unintended childbirth. We previously remarked that contradictory effect mechanisms may be assumed to be at work in the case of women, therefore the employed/non-employed variable is an oversimplification when it comes to females. Not to speak about the fact, especially among women, that many different kinds of activity status (unemployed, dependent, homemaker, parental leave, student) are matched under the category not-employed. In order to better understand the effect of the labor market status of women, an analysis focusing on this issue involving a detailed labor market categorization should be performed (cf. e.g., Kreyenfeld 2005; Spéder and Kapitány 2007). The differentiating effect of the education factor appears significant in the comparison between *intentional parents*



**Table 4** Multinomial regression predicting patterns of realization of time-dependent intentions and intention revision, gender separated

	Postponers <sup>a</sup>		Abandoners		Sooner/unintended births		Consistently opponents	
	Male	Female	Male	Female	Male	Female	Male	Female
Age	1.151***	1.112***	1.149***	1.158***	.948	.906***	1.031	1.051**
Parity1	.566**	.614*	4.298***	4.085***	3.568***	2.386**	2.339***	2.121***
Parity2+	.270***	.299***	7.277***	8.013***	9.237***	14.950***	19.230***	15.434***
Cohab at wave I	1.059	1.821**	1.712	1.748	1.556	1.892*	1.587*	1.402
Alone at wave I	7.501***	4.135***	14.286***	4.562***	3.397**	2.850***	35.151***	10.469***
Job	.790	1.145	.452**	1.169	.525*	.635*	.407***	.642**
Education	.938	1.002	.892**	.938	1.019	.950	.965	.889***
Calvinist	1.741**	1.200	.976	1.044	.931	1.081	1.027	1.265
Other religion	.730	1.038	.761	.707	.806	.834	.844	1.038
No religion	1.427	1.322	1.275	1.722*	.773	1.319	1.458*	1.479*
Overall life satisfaction	1.008	.984	.878*	.941	.836**	.840	.961	.953
Chi-square:	783***	760***						
Df:	44	44						
Nagelk. $R^2$	0.34	0.32						
n:	2,174	2,297						

<sup>a</sup> The comparison group is the *intentional parents*\*  $p < .01$ ; \*\*  $p < .05$ ; \*\*\*  $p < .001$

versus *abandoners*: higher educational attainment results in a higher likelihood of realizing fertility intentions, while lower educational attainment means higher probability of the abandonment of plans. Both findings are in line with the assumption that the income effect among men has a key impact on childbearing. The two structural factors—measured in the above-mentioned crude way—have no influence on one's successful realization or postponement of fertility plans.

As regards subjective factors, they seem to have dissimilar effects among men and women. A significant effect of religiosity can be detected among women without denominational affiliation. Non-religious women are more likely to abandon their fertility plans. The effect of denominational division between Catholics and Calvinists is limited to men—Calvinist men are more likely to postpone than Catholic ones. This finding confirms that the study of religious affiliation is appropriate in Hungary. Finally, the effect of overall life satisfaction is observable among men. No difference between intentional parents and postponers can be detected, but those who abandon their fertility intentions tend to be more pessimistic, i.e., less satisfied with their past life course and future prospects. It is also apparent that unintended or sooner-than-intended births tend to occur to people who are less satisfied with their life.

Finally, we would like to highlight a findings which is contrary to our expectations in that it shows no differences between genders. For both men and women, age is significantly related to fertility outcomes. It was not unjustified to assume that the gender-specific biological limits of fertility result in different effect mechanisms among men and women (as it can be clearly seen in the relation between intended and unintended births). The fact that age shows significant effects among men with regard to both the *intentional parent–abandoner* and the *intentional parent–postponer* relations seems to suggest that social norms associated with age regulate not only female but male behavior as well.

## 5 Conclusions

Our analysis shows that demographic factors play a key part in the realization of fertility intentions, but social–structural situations and personal orientations have no negligible influence either. The chances that fertility intentions remain unrealized increases along with the aging process. Whereas childbearing may have social and biological limits, approaching these limits does not seem to increase the chances of successfully realizing fertility intentions. People who already have children—especially those with more than one—are more likely to abandon their childbearing intentions while childless people are more likely to postpone their fertility plans. Partner status occupies a key position: a person with short-term fertility intentions has very little chance of carrying them out if he or she is not in a partnership. The legal status of the partnership also seems to have an effect: while cohabitation and non-marital births are widespread in Hungary, those living in legal marriages have a better chance to realize their fertility intentions. According to the results, employment is an important prerequisite of realization of fertility intentions among

men in today's Hungary. Those without a job at the time of the first wave were more likely to abandon childbearing intentions or to have an unintended birth. There is no difference between intentional parents and postponers in this respect. In our opinion, however, further research needs to be conducted to explore the relationship between employment status, family support structures available at the birth of a child, and the realization of fertility intentions.

The gender-based influences of labor market situation and income position is common in fertility, but it is rather rare to stress attitudinal differences. We found such dissimilarities. An optimistic outlook and a general satisfaction seem to be important for men: those with a positive opinion of their present situation and future outlook are more likely to have a child (or postpone childbearing) and less likely to abandon their intentions. Access to resources, of course, generates higher levels of satisfaction, but in this case, we observed a clear, additional effect of overall satisfaction.<sup>15</sup> Religious affiliation has an impact on both men and women, but in different ways. A significant effect is exercised by men's being Calvinist or not and women's being religious or non-religious. In the future, we would be well advised to study not only whether norms and values play a part in childbearing behavior but also whether the same or different aspects of these norms and values carry more weight for men and women, respectively.

Finally, we would like to comment on the general question of postponement. We are aware that one of the fundamental reasons for the difference between the expected mean number of children and the total fertility rate in a given time period is that young people today plan to establish a family and have children later in life than they did in earlier times. Low fertility, however, is a consequence of not only this "planning for later" but also of the fact that people who intend to have children on the short run often postpone or altogether abandon the realization of their intentions. Further research needs to be conducted to determine what share of the drop in macro-level fertility is due to initial postponement, and what percentage is the result of subsequent postponement or abandonment of short-term fertility intentions.

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<sup>15</sup> Elsewhere, we included not only employment status and education in the analysis but income status as well, and the effect still persisted (Spéder and Kapitány 2007).

## Appendix

**Table 5** Means and standard deviations of independent variables

	Mean	Standard deviation
Age	28.3	6.2
Male	0.49	0.50
Parity1	0.16	0.36
Parity2+	0.36	0.48
Cohabiting at wave I	0.13	0.33
Alone (without partner at wave I.)	0.43	0.49
Job	0.65	0.48
Education (number of finished classes)	11.4	2.3
Calvinist	0.15	0.36
Other religion	0.11	0.31
No religion	0.22	0.42
Overall life satisfaction (Cronbach's Alpha 0.85)	6.85	1.62

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